WE CLAIM

1. A method for stimulating expression of a STAT transcription factor, comprising contacting a cell capable of said expression with an amount of an IL-TIF/IL-21 to said cell sufficient to stimulate said expression.

2. The method of claim 1, wherein said STAT transcription factor is STAT 3 or STAT 1.

3. The method of claim 2, wherein said STAT transcription factor is STAT 3.

4. The method of claim 1, wherein said IL-TIF/IL-21 is a mammalian IL-TIF/IL-21.

5. The method of claim 4, wherein said mammalian IL-TIF/IL-21, IL-TIF/IL-21 is human IL-TIF/IL21.

6. The method of claim 5, wherein said human IL-TIF/IL-21 is encoded by SEQ ID NO: 25 or SEQ ID NO: 26.

7. A method for inducing production of an acute phase protein in a cell, comprising contacting said cell with an amount of an IL-TIF/IL-21 sufficient to induce production of said acute phase protein.

8. The method of claim 7, wherein said cell is a liver cell.

9. The method of claim 7, wherein said acute phase protein is human serum amyloid A, α1 chymotrypsin, or haptoglobin.

10. The method of claim 7, wherein said IL-TIF/IL-21 is a mammalian IL-TIF/IL-21.

11. The method of claim 10, wherein said mammalian IL-TIF/IL-21 is human IL-TIF/IL-21.

12. The method of claim 11, wherein said human IL-TIF/IL-21 is encoded by SEQ ID NO: 25 or SEQ ID NO: 26.

13. A method for modulating activity of an IL-TIF/IL-21 molecule, comprising contacting a cell susceptible to IL-TIF/IL-21 activity with an IL-TIF-IL-21 modulator, in an amount sufficient to modulate IL-TIF/IL-21 activity.

14. The method of claim 13, wherein said modulator is a substance which binds to IL-10Rβ molecules.

15. The method of claim 14, wherein said modulator is an antibody which binds specifically to an IL-10Rβ molecule.

16. The method of claim 16, wherein said modulator is an antagonist of an IL-10R molecule.

17. The method of claim 16, wherein said IL-10R molecule is an agonist of an IL-10R molecule

18. The method of claim 14, wherein said molecule is an agonist of an IL-10R molecule.

19. The method of claim 18, wherein said IL-10R molecule is IL-10Rβ.

20. A method for determining exposure to an inflammatory substance, comprising assaying a sample taken from a subject believed to have been exposed thereto for expression of IL-TIF/IL-21 wherein expression of TIF is indicative of exposure to an inflammatory substance.

21. A method for identifying a modulator of IL-TIF/IL-21, comprising contacting a substance believed to be a modulator of IL-TIF/IL-21 to a source of IL-TIF/IL-21 and a cell which expresses an acute phase protein, and determining acute phase protein produced by said cell, wherein a change in production of said acute phase protein relative to production by said cell in the absence of said substance is indicative of said substance being an IL-TIF/IL-21 modulator.

ABSTRACT OF THE DISCLOSURE

The invention involves isolation of nucleic acid molecules, the expression of which are upregulated by interleukin-9. The amino acid sequences of the proteins which correspond to the nucleic acid molecules show some structural features of cytokines. In addition to the nucleic acid molecules and the proteins, various uses of the molecules are disclosed. The molecules are referred to as T cell inducible factors. The molecules are implicated in activation of STAT molecules, acute phase proteins, and inflammation.